ABSTRACT

A method for communicating a Physical Layer (PHY) mean square error (MSE) to an upper layer device driver includes: receiving a frame by the PHY; computing a MSE for the frame by the PHY; sending the MSE and the frame to a Media Access Control (MAC); inserting the MSE into a frame status frame (FSF) associated with the frame by the MAC; and sending the frame and the FSF to the upper layer driver software. With access to the PHY MSE, the upper layer driver software can compute the average mean square error (AMSE) and determine if a change in the payload encoding (PE), or data transmission rate, should be negotiated. In this manner, the data transmission rate can be optimized while maintaining a low error rate.

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